



SEQUENCE LISTING

<110> PUNNONEN, JUHA
WRIGHT, ANNE
SEMYONOV, ANDREY

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<141> 2001-06-21

<150> 60/213,829

<151> 2000-06-23

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<170> PatentIn Ver. 2.1

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<212> DNA

<213> Artificial Sequence

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<212> DNA

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<211> 1767

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<223> Description of Artificial Sequence: Synthetic
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aggtaactcc cgttgcggtg ctgttaacgg tggagggcag tgtagtctga gcagtactcg 1680
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1767

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<210> 9

<211> 1689

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 9

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attggctcat gtccaatacg accgccatgt tgacattgat tattgactag ttattaatag 240
taatcaatta cggggtcatt agttcatagc ccataatatgg agttccgcgt tacataactt 300
acggtaaata gcccgcctgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
acgtatgttc ccataagtaac gccaataggg actttccatt gacgtcaatg ggtggagtat 420
ttacggtaaa ctgcccactt ggcagtacat caagtgtatc atatgccaag tccgccccct 480
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gactttccta cttggcagta catctacgta ttagtcatcg ctattacat ggtgatgcgg 600
ttttggcagt acaccaatgg gcgtggatag cggtttgact cacggggatt tccaagtctc 660
caccctcatt acgtcaatgg ggcgttccta tgacgcaaat gggcggtagg cgtgtacggg 720
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gccgcacaag gccgtggcgg tgttgtgttc tgataagagt cagaggtaac tcccgttgcg 1560
gtgctgttaa cgggtggagg cagtgtagtc tgagcagtag tcgttgctgc cgcgcgcgcc 1620
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caccgtctt
1689

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<210> 10

<211> 1715

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 10

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atcaatattg gctattggcc attgcatacg ttgtatctat atcataatat gtacatttat 180
attggttcat gtccaatatg accgccatgc tgacattgat tattgactag ttattaatag 240
taatcaatta cggggtcatt agttcatagc ccataatatgg agttccgcgt tacataactt 300
acggtagatg gcccgcctgg ccgaccgccc aacgaccccc gccattgac gtcaataatg 360
acgtatgtcc ccataagtaac gccaataggg actttccatt gacgtcaatg ggtggagtat 420
ttacggtaaa ctgcccactt ggcagtacat caagtgtatc atatgccaag tacgccccct 480
attgacgtca atgacggtaa atggcccgcc tggcattatg ccagtagcat gaccttacgg 540
gactttccta cttggcagta catctacgta ttagtcatcg ctattacat ggtgatgcgg 600
ttttggcagt acatcaatgg gcgtggatag cggtttgact cacggggatt tccaagtctc 660
caccctcatt acgtcaatgg ggcgttccta tgacgcaaat gggcggtagg cgtgtacggg 720
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cacgctgttt tgacctccat agaagacacc gggaccgatc cagcctccgc ggcggggaac 840
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cggactctgt atttttacag gatgggggtcc catttattat ttacaaattc acatatacaa 1200
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agagtcagag gtaactccc ttgcggtgct gttaacggtg gagggcagtg tagtctgagc 1620
agtgtcgtt gctgccgcgc gcgccaccag acataatagc tgacagacta acaggctgtt 1680
ccttttcatg ggtcttttct gcagtcaccg tcctt 1715

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<210> 11

<211> 1757

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 11

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attggctcat gtccaatatg accgccatgc tgacattgat tattgactag ttattaacag 240
taatcaatta cggggctcatc agttcatagc ccataatatg agttccgcgt tacataactt 300
acggtaaatg gcccgcctgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
acgtatgttc ccataagtaac gccaataggg actttccatt gacgtcgatg ggtggagtat 420
ttacggtaaa ctgcccactt ggcagtagac caagtgtatc atatgccaa g tccgccccct 480
attgacgtca atgacggtaa atggcccgc tggcattatg ccagtagac gacctacg 540
gactttccta cttggcagta catctacgta ttagtcacg ctgttaccat ggtgatgcgg 600
ttttggcagt acaccaatgg gcgtggatag cggtttgact cacggggatt tccaagtctc 660
caccctattg acgtcaatgg gagtttgttt tggcaccaaa atcaacggga ctttccaaaa 720
tgtcgttaata accccgcccc gttgacgcaa atgggaggta ggcgtgtacg gtgggaggtc 780
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cgttgccgtg ctgttaacgg tggagggcag tgtagtctga gcagtactcg ttgctgccgc 1680
gcgcgccacc aaacataata gctgacagac taacagactg ttcctttcca tgggtctttt 1740
ctgcagtcac cgtcctt 1757

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<210> 12
 <211> 1574
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

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 atcaatattg gctattggcc attgcatacg ttgtatctat atcataatat gtacatttat 180
 attggctcat gtccaacatt accgccatgt tgacattgat tattgactag ttattaatag 240
 taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt tacataactt 300
 acggtaaagt gcccgcctgg cattatgccc agtacatgac cttacgggac tttcctactt 360
 ggcagtacat ctacgtatta gtcacgcta ttaccatggg gatgcgggtt tggcagtaca 420
 ccaatgggag ttgtagcggg tttgactcac ggggatttcc aagtctccac cccattgacg 480
 tcaatgggag tttgttttgg caccaaaatc aacgggactt tccaaaatgt cgtaataacc 540
 ccgccccgtt gacgcaaagt ggcggtaggc gtgtacgggt ggaggtctat ataagcagag 600
 ctcgtttagt gaaccgtcag atcgctgga gacgccatcc acgtgtttt gacctccata 660
 gaagacaccg ggaccgatcc agcctccgcg gccgggaacg gtgcattgga acgcggatcc 720
 cccgtgccaa gagtgacgta agtaccgcct atagactcta taggcacacc ctttggctc 780
 ttatgcatgc tatactgttt ttggcttggg gcctatacac ccccgttcc ttatgctata 840
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 atgggggtccc atttattatt taaaaattca catatacaac aacgccgtcc cccgtgccc 1080
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 cggtcatagg tcgctcggca gtccttgcct cctaacagtg gagggccagac ttaggcgcag 1260
 cacaatgccc accaccacca gtgtgccgca caaggccgtg gcggtagggt atgtgtctga 1320
 aaatgagctc ggagattggg ctgcaccgc tgacgcagat ggaagactta aggcagcggc 1380
 agaagaagat gcaggcagct gagttgtgt attctgataa gagtcagagg taactcccgt 1440
 tgcggtgctg ttaacgggtg agggcagtg agtctgagca gtactcgttg ctgccgcgcg 1500
 cgccaccaga cataatagct gacagactaa cagactgttc ctttccatgg gtcttttctg 1560
 cagtcaccgt cctt 1574

<210> 13
 <211> 1765
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 13
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 atcaatattg gctattggcc attgcatacg ttgtatccat atcataatat gtacatttat 180
 attggctcat gtccaatatg accgccatgt tgacattgat tattgactag ttattaatag 240
 taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt tacataactt 300
 acggtagatg gcccgcctgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
 acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg ggtggagtat 420
 ttacggtaaa ctgccactt ggcagtacat caagtgtatc atatgccaag tccgccccct 480
 attgacgtca atgacggtaa atggcccggc tggcattatg cccagtacat gaccttacgg 540

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gactttccta cttggcagta catctacgta ttagtcacg ctattaccat ggtgatgcgg 600
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caccgccattg acgtcaatgg gagtttgct tggcaccaaa atcaacggga ctttccaaaa 720
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gaacgcggat tccccgtgcc aaagtgcgt aagtaccgcc tatagactct ataggcacac 960
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gtaactcccg ttgcgtgtct gttaacggtg gagggcagtg tagtctgagc agtactcgtt 1680
gctgccgcgc gcgccaccag acataatagc tgacagacta acagactgtt cctttccatg 1740
ggtcttttct gcagtcaccg tcctt 1765

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<210> 14

<211> 1767

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 14

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atcaatattg gctattggcc attgcatacg ttgtatctat atcataatat gtacatttat 180
attggctcat gtccaatatg accgccatgt tgacattgat tattgactag ttattaatag 240
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acggtaaatg gccgccttgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg ggtggagat 420
ttacggtaaa ctgcccactt ggcagtacgt caagtgtatc atatgccaag tccgccccct 480
attgacgtca atgacggtaa atggcccgcc tggcattatg ccagtagacat gaccttacgg 540
gactttccta cttggcagta catctacgta ttagtcacg ctattaccat ggtgatgcgg 600
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caccgccattg acgtcaatgg gagtttgct tggcaccaaa atcaacggga ctttccaaaa 720
tgtcgtaata accccgcccc gttgacgcaa atggcggtta ggctgtacg gtgggaggtc 780
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gaccactccc ctattggtga cgatactttc cattactaat ccataacatg gctctttgcc 1140
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cccattccct cagcggctca tggctcgtc gcagctcctt gctcctaaca gtggaggcca 1440
gacttaggca cagcacaatg cccaccacca ccagtgtgcc gcacaaggcc gtggcggtag 1500

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ggatatgtgtc tgaaaatgag ctcgagatt gggctcgac cgctgacgca gatggaagac 1560
ttaaggcagc ggcagaagaa gatgcaggca gctgagttgt tgtattctga taagagtcag 1620
aggtagctcc cgttgcggtg ctgttaacgg tggagggcag tgtagtctga gcagtactcg 1680
ttgctgccgc gcgcgccacc agacataata gctgacagac taacagactg ttcctttcca 1740
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1767

<210> 15

<211> 1767

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 15

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atcaatattg gctattggcc attgcatacg ttgtatctat atcataatat gtacatttat 180
attggctcat gtccaatatg accgccatgt tgacattgat tattgactag ttattaatag 240
taatcaatta cggggtcatt agttcatagc ccataatgg agttccgcgt tacataaactt 300
acggtaaatg gccgccttgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg ggtggagtat 420
ttacggtaaa ctgcccactt ggcagtacat caagtgtatc atatgccaag tccgccccct 480
attgacgtca atgacggtaa atggcccgcg tggcattatg ccagtagcat gaccttacgg 540
gactttccta cttggcagta catctgcgta ttagtcacg ctattaccat ggtgatgcgg 600
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caccctattg acgtcaatgg gagtttgttt tggcaccaaa atcaacggga ctttccaaaa 720
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aggtaactcc cgttgcggtg ctgttaacgg tggagggcaa tgtagtctga gcagtactcg 1680
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tgggtctttt ctgcagtcac cgtcctt

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1767

<210> 16

<211> 1767

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 16

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atcaatattg gctattggcc attgcatacg ttgtatctat atcataatat gtacatttat 180
attggctcat gtccaatatg accgccatgt tgacattgat tattgactag ttattaatag 240
taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt tacataactt 300
acggtagatg gcccgcctgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg ggtggagtat 420
ttacggtaaa ctgcccactt ggcagtacat caagtgtatc atatgccaag tccgccccct 480
attgacgtca atgacggtaa atggcccgcc tggcattatg ccagtagcat gaccttacgg 540
gactttccta cttggcagta catctacgta ttagtcatcg ctattaccat ggtgatgagg 600
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caccgccattg acgtcaatgg gagtttggtt tggcaccaaa atcaacggga ccttccaaaa 720
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tgggtctttt ctgcagtcac cgtcctt 1767

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<210> 17

<211> 1757

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 17

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attgacgcca atgacggtaa atggcccgcc tggcattatg ccagtagcat gaccttacgg 540
gactttccta cttggcagta catctacgta ttagtcatcg ctattaccat ggtgatgagg 600
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cgttgccgggtg ctgttaacgg tggagggcgg tgtagtctga gcagtactcg ttgctgccgc 1680
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ctgcagtcac cgtcctt

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1757

<210> 18

<211> 1767

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 18

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1767

<210> 19
 <211> 1767
 <212> DNA
 <213> Homo sapiens

<400> 19
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 atcaatatgg gctattggcc attgcatacg ttgtatccat atcataatat gtacatttat 180
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 taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt tacataactt 300
 acggtaaatg gccgcctgg ctgaccgccc aacgaccccc gccattgac gtcaataatg 360
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 tgggtctttt ctgcagtcac cgtcctt 1767

<210> 20
 <211> 1665
 <212> DNA
 <213> Homo sapiens

<400> 20
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 attggctcat gtccaatatt accgccatgt tgacattgat tattgactag ttattaatag 240
 taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt tacataactt 300
 acggtaaatg gccgcctcg tgaccgccc aacgaccccc ccattgacg tcaataatga 360
 cgtatgttcc catagtaacg ccaatagggg actttccatt acgtcaatg gtggagtatt 420
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 caccctcatt acgtcaatgg gagtttgttt tggcaccaaa atcaacggga ctttccaaaa 720
 tgctcgtaata accccgcccc gttgacgcaa atgggcggta ggcgtgtacg gtggagggtc 780

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gtatgtgtct gaaaatgagc tcggagattg ggctcgacc gtgacgcaga tgggaagactt 1560
aaggcagcgg cagaagaaga tgcaggcagc tgagtaccag acataatagc tgacagacta 1620
acagactgtt cttttccatg ggtcttttct gcagtcaccg tcctt 1665

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<210> 21

<211> 1767

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Consensus
sequence

<400> 21

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taatcaatta cggggctcatt agttcatagc ccatatatgg agttccgcgt tacataactt 300
acggtaaatg gccgcgctgg ctgaccgccc aacgaccccc gcccatggac gtcaataatg 360
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ttgctgccgc gcgcgccacc agacataata gctgacagac taacagactg ttcctttcca 1740
tgggtctttt ctgcagtcac cgtcctt 1767

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<210> 22
 <211> 821
 <212> DNA
 <213> *Macaca* sp.

<400> 22
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 aggttcaata gaatggccaa taagccaata tgccattggc caacatggca atggggcagt 180
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 gccatattgg cttatgtcca ttaccaatac catatatggg tcttccctata tacgtcatag 300
 gtaccgcca ttgacgtaat atggatacgc ctccattgac gtcaatggga gggattaata 360
 tacgtcacta ataccgcca ttgacgtgta taggaccgtc ccattgacgt caataggccc 420
 acctccatt gacgtcaatg ggggtggcca ttgcccattc ccacgcccc tattgacgtc 480
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 ggaaccgcca ttctgcctgg ggacgtcggg ggagcaccat agaaggtagc ggggaccgat 780
 ccagcctcca tagccgggaa gggtcgattg gaacgcggat a 821

<210> 23
 <211> 738
 <212> DNA
 <213> *Cercopithecus* sp.

<400> 23
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 caagggtaca ttggcaggta ctccattga cgtcaatggc ggtaaatggc ccggcatggc 600
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 ccattgacgt aaatggcggt aggcgtgcct aatgggaggt ctatataagc aatgctcgtt 720
 tagggaaccg ccattctg 738

<210> 24
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 24
 atagcactga gacctatcga attcatatga ggctatatcg ccgata

46

<210> 25
 <211> 45

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 25
 tcagtgaacg cttatctagg atccaaggac ggtgactgca gaaaa 45

<210> 26
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 26
 atagcactga gacctatcga attcaatggc gacttggcat tgagccaatt 50

<210> 27
 <211> 45
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 27
 atagcactga gacctatcga attcacttgg cacgggtgcca agttt 45

<210> 28
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 28
 tcagtgaacg cttatctagg atcctatccg cgttccaatg caccctt 47

<210> 29
 <211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 29
 tcagtgaacg cttatctagg atcctatccg cattccaatg caccgt 46

<210> 30
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 30
 atagcactga gacctatcac cggttggtcc tgtagtttgc taacaca 47

<210> 31
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 31
 tcagtgaacg cttatctaac cggttcgagg cagcttggat ctgtaacg 48

<210> 32
 <211> 53
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 32
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<210> 33
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 33
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<210> 34
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 34
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<210> 35
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 35
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<210> 36
 <211> 33
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 36
 aagctggcta gcatgtcggt tactttgacc aac 33

<210> 37
 <211> 32
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 37
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<210> 38
 <211> 11
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

 <400> 38
 gacgccggag g 11

<210> 39
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 39

gacgtcggag

10

<210> 40

<211> 11

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